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RECOGNITION.

BY ARTHUR ALLIN, M. A., PH. D.

1. *The Strange Feeling of Familiarity.*

Sir Walter Scott in "Guy Mannering" writes: "How often do we find ourselves in society, which we have never before met, and yet feel impressed with a mysterious, ill-defined consciousness that neither the scene nor the subject is entirely new; nay, we feel as if we could anticipate that part of the conversation that has not yet taken place." Oliver Wendell Holmes in the "Autocrat of the Breakfast Table" (p. 103) also writes: "All at once a conviction flashes through us that we have been in the same precise circumstances as at the present instant, once or many times before." Shadworth Hodgson in "Time and Space" (p. 273) speaks of "another phenomenon of the very opposite to that of apparent novelty. It is when we have a strong feeling of the sameness of objects, or states of consciousness in redintegration with some object, or state of consciousness which has preceded, but what or where we cannot remember. I allude to cases of dreams and, more rarely, of waking perceptions, where we have a strong conviction of having been before in the same place or the same circumstances as those of the present presentation or representation, but nevertheless can recall no other circumstances which confirm the conviction. Sometimes we dream of a place which appears perfectly familiar; sometimes we see a place waking, which appears familiar, though we know we have not seen it before, and then, perplexed, say we must have seen it in a dream. Here are cases of *an inexplicable sense of familiarity and recognition*, obtaining in dreams, in waking, or in cases which perhaps consist of both. It seems to me probable that this sense of familiarity depends on the rousing of the same particular feeling of interest by two or more different perceptions; and that, from the identity of the interest, we infer the identity of the objects of presentation or representation."

Charles Dickens in "David Copperfield" and in "Martin Chuzzlewit"; Tennyson in "Two Voices," "Early Sonnets,"

and "The Princess"; Thomas Hardy in "A Pair of Blue Eyes"; Edward Dowden, Pierre Loti, Lowell, and many others, have all borne testimony to the same experience.

"I have been here before,
But when or how I cannot tell:
I know the grass beyond the door,
The keen, sweet smell,
The sighing sound, the lights around the shore."

So Rossetti in "Sudden Light," and

"You have been mine before—
How long ago I may not know :
But just when at that swallow's soar
Your neck turned so,
Some veil did fall—I know it all of yore."

One recalls at once Wordsworth's "Our birth is but a sleep and a forgetting," "not in entire forgetfulness," and "those shadowy recollections."

Persons of a poetical, mystical and speculative nature speak of these experiences as "vestiges of a previous state of existence, as an echo from a life anterior to the present one." Plato's doctrine of "reminiscence" and immortality has probably a psychological basis in this strange feeling of familiarity. Coleridge writes: "And some have said we lived ere yet this robe of flesh we wore." One writer speaks of these "convictions of metempsychosis difficult to shake off."

Sir James Crichton-Browne, M. D.,¹ regards these experiences "not as intimations of immortality, but as revivals of hereditarily transmitted or acquired states in new and special combinations." They have been enthusiastically described as "indescribable" and "transcending all common experience," as "excursions into that infinite field that lies behind appearances, and of which it is dangerous to affirm or deny anything. Plunges they are into these depths of outer mystery in which the certitudes of faith arise. Momentary realizations they become of Nirvana, or the cessation of being, or foretastes of purgatorial pains more scorching than any that Dante conceived."

Again, these phenomena occur in circumstances the most commonplace and trivial, as in blacking boots, picking up a pin, etc.

¹ *Lancet*, July 6th and 13th, 1895. MM. Dugas, Lalande, and van Biervliet (*Rev. Philos.*, 1893 and 1894) in their discussions on this subject give many other interesting cases well worthy of being noted. Their explanations are, however, hardly on a par with their examples. *Vide, also,* "Sulla paramnesia, o falsa memoria." Nota del Prof. Tito Vignoli (*Rendiconti del R. Istituto Lombardo*, 1894). Prof. Burnham in *AMERICAN JOURNAL OF PSYCHOLOGY*, Vol. II, gives many cases and much bibliography on the subject of paramnesia.

Some account for these phenomena by Wigan's doctrine of the brain's being a double organ, its hemispheres working together like the two eyes. One of the hemispheres hangs fire, they suppose, and the small interval between the perceptions of the nimble and the sluggish half seems an indefinitely long period, and therefore the second perception appears to be the copy of another, ever so old—manifestly a doctrine not much better than the scholastic one. "*Memoriae sedes, ac velut fabrica, in occipitio est a natura collocata, admirabili sapientia, quod præterita cernat.*"

M. Lalande explains these phenomena as due to a moment of absence, followed by a brusque awakening of the attention: one perceives without apperceiving; upon this sensation becoming an object of apperception, the phenomenon in question arises. The sensation is met and recognized by its memory-presentation (*se souvenir surgit des ténèbres de l'inconscient, et il dissipe ces ténèbres*). These two mental presentations associate with each other without being able to fuse; hence a memory-presentation which produces the effect of a perception and a perception which produces the effect of a memory-presentation.¹

Wigan ("Duality of the Mind," 1844, pp. 84-5) speaks as follows on this subject: "Sir Walter Scott calls this mental phenomenon 'a sentiment of pre-existence.' It is a sudden feeling, as if the scene we have just witnessed (although from the nature of things it could never have been seen before) had been present to our eyes on a former occasion, when the very same speakers, seated in the very same positions, uttered the same sentiments, in the same words—the postures, the expression of countenance, the gestures, the tone of voice, all seem to be *remembered*, and to be now attracting attention for the second time. Never is it supposed to be the third time."²

¹ M. Lalande admits also a *telepathic* sense, perceiving in advance facts which one would not fail to *recognize*, when they fell afterwards under the ordinary senses. M. Dugas "in order to escape the humiliation" of resting short without a decent hypothesis, suggests that "false memory is a very special case of the doubling of the personality!" But how and why should this doubling of the personality take place? "Perhaps," he says, "in consequence of a spontaneous self-hypnotization!"

² Höffding in his *Psychologie* and in other articles notices these peculiar phenomena and calls them "immediate recognition"; he, however, most unwarrantably, extends this designation to *all cases of perception*, although it is perfectly manifest that all cases of perception do not have this strange feeling of familiarity attaching to them. It is just on account of the scarcity of the phenomena that we add the epithet "strange." Höffding writes: "An individual trait of a countenance, a color tone of the sky, an accidentally

Now this delusion occurs only when the mind has been exhausted by excitement, or is from indigestion, or any other cause, languid, and only slightly attentive to the conversation. The persuasion of the scene, being a repetition, comes on when the attention has been roused by some accidental circumstance, and we become, as the phrase is, wide awake.

. . . "I have often noticed this in children, and believe they have sometimes been punished for the involuntary error, in the belief that they had been guilty of deliberate falsehood."

This is the phenomenon of *strange familiarity* which has to be explained. It plainly includes *perception + the feeling of strange familiarity*. This Höffding calls "immediate recognition," and extends the designation to all cases of perception, asserting therefore that in each case of perception we have *perception + the feeling of strange familiarity*. And if the feeling of strange familiarity is the recognition-element, then Höffding is certainly not correct in saying that *perception alone is recognition*.

This phenomenon has to be explained and also the somewhat frequent phenomena of recognition in general, *i. e.*, of *object-known-againness*. Certain phenomena, however, generally asserted to be memory and recognition, must first be shown to be no memory or recognition.

2. "*Half-dream conditions*," *dreams, imagination, in short, all centrally excited presentations are not thereby phenomena of memory and recognition*.

"Half-dream conditions" are the *Halbtraumzustände* of the Germans, and are the object of frequent references in the

heard word can appear to us as known (*bekannt* = known again or recognized, with Höffding), without our being able or even without our feeling the need of referring them to definite former occurrences. They appear to us differently from perfectly new sensations. They have a different stamp. It is the same when we are not able to call back a name in memory, while we are at once absolutely sure that this was the one meant upon its being named. Here, also, the recognition is immediate; the name sounds to us as immediately known (*bekannt*). The difference between that which appears to us as known, familiar, home-like, and that which appears to us as new and unknown, cannot be described more nearly. This difference is given just as simply and immediately as the difference between red and yellow, or between pleasure and pain. Repeated sensations can present themselves to us with a peculiar quality, which one could name the *quality of knownness* (recognition) (*Qualität der Bekanntheit*) as the opposite of the *quality of strangeness*" (S. 163). It is hardly needful to point out the confusion of thought which Höffding labors under in the use of the word "*bekannt*." Because we know or are acquainted with an object, we do not necessarily have the subjective experience of *object-known-againness*. An object known with "the quality of strangeness" ought to be, if these psychologists were consequent in their thinking, a contradiction in itself.

psychiatries. Krafft-Ebing names them *Dämmerzustände*. Epileptics show quite a tendency to fall into this state. Fatigue induces it in many cases. Unwonted strain in unwonted surroundings is often the inducing cause. Their usual circle or world of ideas vanishes, or rather changes, and the subjects live, so to speak, in a different world. Such persons, if at a long distance from home and if subject to a strange and new set of conditions (homesickness), are apt to be subject to these attacks. Young soldiers, without any premeditation, attacked by these "half-dream states," visit their far-off homes, and in terror awake from this condition far from their garrison town.¹ Westphal describes this as a condition in which consciousness can be deeply disturbed, and in such a way that the person concerned moves in a world of ideas which appears separated or loosed from his normal one. Acting in accordance with this abnormal circle of ideas (with their concomitant feelings and will-movements), he performs acts which are completely foreign to the usual content of his thinking, and which have no relation at all to it. Nevertheless coherent and, up to a certain point, consequent action remains intact, all being in accordance with the prevailing set of ideas.

The causal mechanism of these half-dream states one may construe after the analogy of dreams, in which the ideas of the day time, involving strained and fatiguing exercise of the cortical centres, are replaced by unusual ideas,—ideas, the objects of which were experienced in a far away, more remote time. Students in a foreign land are apt to experience this during the first few weeks of their sojourn. It is homesickness. The new surroundings fail of associations and interest; it is strain and tension to attend to them. The world lived in is the old world, the home world. In lying down upon the sofa during the day for a rest, the same phenomenon occurs. The cortex during the day has been in a severe state of *tension*. The activity has been prolonged and great, the strain unceasing. Rest comes at the end of the labor. The muscular strain is relaxed. The waste products of the system, which clogged and delayed the reparative process, have now freer and more unimpeded channels. All function is less restrained and follows the line of least resistance. It is easier for the nervous impulses to slide into the old paths than to attempt to scale the heights, or pioneer in comparatively new and untrodden paths. The new associations formed during the day, or at least quite recently, involved much pioneering, strain and nervous exhaustion; this, however, gives way after the tension is

¹ Meynert, "Klinische Vorlesungen über Psychiatrie," S. 81.

over. The old-established and oft-repeated associations have now the right of way. As in financial crises, the "old-established houses" almost always weather the gale; the new houses go to the wall. Their "connections" are at different stages of growth. When falling asleep and immediately afterward reawakening, we find, usually, not the events of the day, but those of far-off experiences to be the subjects of our dreams. Even in lying down on a sofa for a complete rest, the same phenomena occur. In cases of general break-up, when the strong nervous organization of the brain begins to fail, general names remain the longest.

If those phenomena usually designated "will" have their physiological correlate, not in any one definite locality of the cortex, but rather in each presentation centre, then we may more easily understand how it is that the movements and actions of the patient are connected with, or flow from, the presentation centres actually prevailing.

Ross, in his "Diseases of the Nervous System," says (p. 137): "Experiments on animals have shown that a nerve whose nutrition is lowered, discharges its energy more readily than one whose nutrition is perfect, and similarly when the nutrition of the *sensorium commune* is defective, it responds to stimuli of less intensity than when its nutrition is normal." "The depressing emotions, such as fear and anger, are also liable to become excessive during states of nervous exhaustion, and it is a matter of common observation that a person who is in feeble health is often very irascible, while others are easily excited to laughter or tears." "When the inhibitory action of the highest or higher coördinating centres is removed, the functional activity of the lower centres may be increased. Many atrocious murders are said to have been committed during the period of semi-consciousness which sometimes follows an epileptic seizure. . . . It is probable that in delirium the stock of irritable matter in the gray substance of the cortex is much exhausted, and that what remains manifests an undue degree of irritability, so that the protoplasm gives out energy either spontaneously or on the application of slight stimuli, while functionally there is a dissolution from the later to the earlier acquired feelings and experiences."¹

It is during these fatigued states that strange and unlooked-

¹ Holmes somewhere says: "The seat of the will seems to vary with the organ through which it is manifested; to transport itself to different parts of the brain, as we may wish to recall a picture, a phrase, or a melody; to throw its force on the muscles, or the intellectual processes. Like the general-in-chief, its place is everywhere in the field of action."

for associations occur, thus giving rise often to some of those cases of strange familiarity cited above.

These states of half-dreaming, dreaming and imagination are not memory or recognition proper. There is no reference whatever to the past. They are what may be called *object-consciousness*. And if time enters into these phenomena it is a present time. The dreams of savages are often asserted to be for them real, as if they were not so for us also. The only difference lies in the after-thought of those dreams. To both they are real during the dream. So with illusions and hallucinations. *During these states*, the objects are regarded as objectively present, just as much as in the every-day normal perceptual world.

We thus attain to two classes of phenomena, the *peripherally excited* and the *centrally excited*. The latter class has generally been called *memory*, but quite wrongly so. There is absolutely no reference to the past whatever in them, of themselves. It is an additional process, that of memory and recognition. With the exception of the element of *reproduction* in his teaching, Christian Wolf saw clearly some truth in this matter. He writes, "Psychologia Empirica," §176 : "*Facultas ideas, que antea habuimus, reproducendi, non pertinet ad memoriam,*" and "*Facultas producendi perceptiones rerum sensibilium absentium Facultas imaginandi seu Imaginatio appellatur,*" §92. Note the definition he gives and the example, "*Ideam reproductam recognoscere dicimur, quando nobis consciī sumus, nos EAM jam antea habuisse. Videmus hominem in templo alibi jam ante visum. Dum eum intuemur, consciī nobis sumus, nos EUM jam ante vidisse,*" §93.

To say that memory and recognition is explained by the *reproduction of former experiences*, which would be simply the former perceptions, present, fresh, etc., is to give an explanation precisely on a par with that of the scholastic quoted above. "*Memoriae sedes, ac velut fabrica, in occipitio est a natura collocata, admirabili sapientia, quod præterita cernat.*"

The lonely traveler actually sees a robber with outstretched arm in the gathering twilight. He *sees* the robber, and it is to him a robber. It is a full and complete perception of a robber — for him. But the external object is the stump of a tree with a gaunt, outstretched limb. There are then in this perception certain elements of the perception *centrally excited*. They were not, however, on that account memories or memory pictures (*Erinnerungsbilder*). They were like the sense-impressions; in fact, they *were* sense-impressions. Manifestly, centrally excited presentations are not on that

account memories ; though memory is often thus explained, viz., as the reproduction of former impressions.

It may be argued that the centrally excited presentations cannot be explained otherwise than as reproductions of former sense-impressions. But if the sense-impressions are regarded as new creations, so also may the centrally excited ones. Carpenter puts forward the probable causal mechanism on the physiological side in a very terse, concise form. He writes ("Mental Physiology," p. 440, 1891): "As the sensori-motor apparatus — the instrument of our *bodily* activity — appears to *grow to* the mode in which it is habitually exercised, so we seem justified in assuming that the same thing is true of the cerebrum, which is the instrument of our *mental* activity. . . . The material particles constituting this (nervous) system are continually changing, but, according to the laws of nutrition, the structure itself is kept up by re-position of *new* matter in the precise form of the old."

Wundt's definition of a memory-image (*Erinnerungsbild*) is hardly seaworthy. He writes : "We give the name of *Erinnerungsbilder*, or memory-images, to those reproduced ideas, which are so similar to certain former perceptions that they are referred directly to the same." Objections: Ideas are not "reproduced"; "certain former perceptions" are not now present, as stated in the definition; the similarity between the two is not a datum of consciousness; no comparison takes place between them; nor are the *Erinnerungsbilder*, or memory-images, referred directly or indirectly to the former perceptions, as consciousness asserts that the object is known again, not the former perception. Wundt classes together indiscriminately under the name of *Erinnerungsbilder* both centrally excited presentations and other presentations to which are attached the characteristic of "known-againness." Moreover, what can be meant when Wundt says, "The reproduced idea is referred to former impressions"? Is not, according to the definition, the "reproduced idea" the former impression? If it be the same, then how can the one be referred to the other? If it be not the same, then, when it is referred to former impressions, those impressions must be in consciousness at the time in order to be referred to. If they are in consciousness, then nothing is gained, for they are no longer the former impressions. What, also, does this "reference to former impressions" mean? Surely an essential point.

3. Assimilation or Association not Recognition.

Sully ("The Human Mind," I, 181) says: "A simple process of re-cognition is involved in all cognition," and

names this "automatic assimilation or recognition." Herbert Spencer writes: "Every relation, then, like every feeling, on being presented to consciousness, associates itself with like predecessors. Knowing a relation, as well as knowing a feeling, is the assimilation of it to its past kindred; and knowing it completely is the assimilation of it to past kindred exactly like it. . . . Thus the fundamental law of association of relations, like the fundamental law of association of feelings, is that each, at the moment of presentation, aggregates with its like in past experience. The act of recognition and the act of association are two aspects of the same act." ("Principles of Psychology," I, 267 and 270). Wundt identifies recognition with assimilation and defines assimilation as follows: "An assimilation takes place, then, when a new presentation enters consciousness, reproducing former presentations similar to it, and when these elements fuse to a single presentation. Of this reproduction process, we perceive in this case nothing." ("Logik," 2te Aufl. I, 17). One may also cite, besides many others, Höffding (*passim*), who makes perception also an assimilation and assimilation a recognition. For more lengthy quotations see article "The Recognition-Theory of Perception" in this number.

Dr. James Ward ("Assimilation and Association," *Mind*, 1893, p. 347) writes: "Nothing can be plainer than that association in strict propriety of language implies two or more distinguishable and distinct individuals; and is in this respect different from amalgamation or fusion, which both imply the merging of two or more bodies into a new complex and compound." Even granting that such an act as is described by these psychologists under the name of assimilation, fusion of similars or association may take place, *it seems, however, utterly impossible to get recognition or known-again-ness from such an association, fusion or assimilation.* Objectively considered, it may be a second cognition, and in this case a re-recognition, but subjectively it would be *for the percipient's consciousness* simply (Object + Object), becoming eventually fused into (Object), the parentheses signifying a unified act.

Moreover, if it were a case of *association*, then the two presentations associated must be separately cognized in order to be associated. The double cognition of an object will avail nothing. If each cognition is, in their language, however, a recognition, then each cognition will have to be explained by an infinite regressus of assimilations. In association the members associated remain distinct and separate after the act, in fusion, on the contrary, they are supposed to lose their separate identity in a new and different product. Granting what to

me is an impossibility, viz., mental fusion, there still remains the same impossibility of recognition or known-againness arising from such a fusion. Prof. Höffding naïvely admits that such a recognition or memory is "theoretical," "implicate" (*gebundene*), etc., thereby asserting that the phenomena are not actually there in consciousness. This "theoretical," "metaphorical" memory¹ reminds one of Cicero's dictum *re the quasi corpus of the Epicurean god: "Corpus quid sit intelligo: quasi corpus quid sit, nullo prorsus modo intelligo."*

Nor, again, do collateral presentations (*Nebenvorstellungen*), however closely connected with the object cognized, explain the recognition or known-againness of that object. It is nothing to the point in this case, too, if these *Nebenvorstellungen* arise by the so-called processes of association by contiguity or by similarity. The *Nebenvorstellungen* are either a second presentation of the same object, which is, *subjectively*, no known-againness of the object; or they are presentations of some other objects, which is obviously again no known-againness of the first object; or they are emotional or feeling presentations, which also are no knowing-againness or known-againness of the first object. Lehmann, Offner and Ward, as well as many others, seem to be guilty of this mistake. Lehmann's articles are well known. Offner (*Zeitschrift f. Psychologie*, VIII, S. 146) says: "*Die Bekanntheitsqualität ist auf ein Hereinwirken sich nicht über die Schwelle erhebender durch Berührung assoziirter Nebenvorstellungen zurückzuführen.*" Ward in *Mind*, 1894, article "Assimilation and Association," II, p. 532, says: "The mere sense of familiarity or facility is, then, not strictly a re-cognition, or identification of present impression and past image, but a subjective state partly active, partly emotional." Ward also writes (*Ib.*, p. 527): "This earliest and purest assimilation thus briefly indicated, agrees, I believe, in the main with the theory of simple recognition which Höffding has discussed in such a fresh and lucid manner. What Höffding has specially called the *Bekanntheitsqualität* answers to the more subjective side of the process. This I ventured to suggest might be symbolized as Aγ, Bγ, etc., inasmuch as this quality is no part of the content of the presentation recognized, and is essentially the same for one presentation (A) as for another (B). It has been only incidentally referred to here, as

¹ Ward, *Mind*, 1894, p. 528: "Reproduction, like association, presupposes assimilation and not vice versa. Of course, strictly speaking, till we get beyond assimilation, the distinction of A and a is mainly an analytical distinction. The 'tied idea' has no free existence, and in actual apperception has no independent existence."

we were mainly concerned with the ‘tied’ or implicit idea symbolized by the small letter in Höffding’s bracket (α). But it is important to note that both the γ and even this α come into existence through subject activity and interest, and are not produced solely by the primary impression or A. No doubt A is regarded as active in reviving or reproducing α , i. e., on the associationist view; but here it is rather α that is active in apperceiving and appropriating A.” In addition to the above remarks, I have tried in a preceding article to show that this “sense of familiarity or facility” arising, as they say, from practice, repetition and functional activity ought to accompany every sense-impression as well as the so-called ideas, for both demand the same amount of practice, repetition and functional activity. It ought also to be perfectly obvious truth for such able psychologists as these, that not all of the sense-perceptions or “ideas” are accompanied by this feeling of familiarity, facility or known-againness. Only a small fraction of the whole are so accompanied, yet on their argument it is quite necessary that they all should be so accompanied. This link in their chain-armor is decidedly weak, leads in fact to their utter undoing.

I fail also to see how the greater facility with which a presentation arises can of itself be the consciousness of known-againness. It is a valiant deed of Prof. Höffding’s to attempt to solve this problem by calling this sense of facility the *Bekanntheitsqualität* and then asserting that it is something ultimate. The thing is easy, but the saying is hard to understand.

In the former article there were pointed out the mistake and confusion involved in the terms “new sensations” and “strange, unknown sensations.” Ward (*Mind*, 1894, p. 353) makes a similar mistake: “Apart from all hypothesis or inference we have first a new or strange experience, A; then after more or fewer repetitions, we say this experience is ‘cognized’ or is ‘familiar.’” Upon the recognition-theory of perception, how is it that any object whatever, is for the first time cognized; for according to it, all cognition is recognition, and the recognition element is derived from the familiarity element, which is due to much repetition? These many words about change in an idea through practice and repetition are, to me at least, all beside the mark. *The change wrought is the greater facility of coördination in the centres necessarily involved in each presentation.* The slowness and delay of the coördinating activity of the nervous formations upon sight of something not seen before appear to be a much less hazardous hypothesis than that of the creation or gradual evolving of “new sensations.” A part of the

gradually evolved feeling of familiarity with an object may be partly due to the play of associations, lacking in the first case and later gradually acquired; this association being again a further case of the coördinating activity of the various nervous formations. Perhaps the localization theory of brain functions may have some light for this psychological problem. Bonnet, according to the following (cited by Offner, *Philos. Monatsh.*, 1892, S. 407), propounded the same teaching as Höffding, Ward *et al.*: "Ich habe daher gemuthmasst, dass jungfräuliche Fibern [auf die Seele nicht genau so wirken, wie diejenigen, welche es nicht sind; und ich habe die Empfindung der Neuigkeit eben diesem Zustande der Jungferrschaft der empfindlichen Fibern zugeschrieben.]" "Die Empfindung, die mit dieser mehreren Nachgiebigkeit und Beweglichkeit verknüpft ist, macht die Erinnerung (d. h. wohl nur jene eigenthümliche Färbung oder Qualität einer Vorstellung, welche sie als Erinnerung gegenüber der Wahrnehmung charakterisiert) aus, welche um so lebhafter wird, als die Fibern nachgebender oder beweglicher werden."

4. Recognition Objectively and Subjectively Considered.

"Recognition," "Wiedererkennen" and "reconnaissance," as at present used, are ambiguous terms. The objective and the subjective considerations of the process are not held apart. Hence arises an exemplification of the "psychologist's fallacy," *i. e.*, the confusion of the standpoint from which a conception or process is expounded with the standpoint at which it is experienced.¹

Objectively considered, it means that a person may cognize an object a *second* time (*re-cognition*) without being subjectively aware that it is a second perception of the object. The second perception or presentation may be merely a simple awareness of the object, and yet be for the thousandth time perceived, and perceived with the greatest of facility. For the subject, however, it is at the time no proper recognition.

Subjectively considered, the true and proper recognition to be explained is the knowledge or consciousness that the object in question is again perceived or presented. It is known-againness.

According to Sully, Höffding, *et al.*, there is invariably in recognition "a recognizing of the former impression." This is certainly a false description of the facts. The affirmation of consciousness is *not* that the *former impression*, but that the *object, an external reality*, is again perceived, or is known again. The difference is all-important. Probably prepossessed

¹Cf. Ward, *Journal of Spec. Philos.*, 1882, and James, "Principles."

and prejudiced by metaphysical assumptions of an "idealistic" character, the prevailing teaching has been that if there is a known-againness in recognition, then it cannot be of an external object, but of the former perception. If the former impression be therefore known again or recognized, it must necessarily be reproduced, and when recognition was extended to comprise the whole field of perception, the former impression must be there also, and if you cannot find it, it must be there, but unconscious! Ward, with more courage than his contemporaries or predecessors, goes still further, asserting in his doctrine of the *continuum* (Art. Psychology, Enc. Brit.) that all our presentations, both present and *past*, are still in consciousness, though most of them are there subconsciously! (And note, the word "subconscious" does not mean with Ward "unconscious.")

Consciousness in perception is object-awareness; in recognition it is object-known-againness, and not former-perceptions-known-againness. Höffding himself unwittingly admits it. "A single trait of a countenance, a color tone of the sky, an accidentally heard word can appear to us as known again (*bekannt*=recognized) *without our being able, or even without our feeling the need of referring them to definite former experiences (Erlebnisse)*" (*Psychologie*, 2te Aufl. 161).

Let us now take a case of recognition. I perceive now this book before me. That is a perception. If I had passed on to some other object immediately, there would have been no recognition of that book; but after the perception of the book, a fainter presentation of a person who gave me that book arose, although that person was not externally then present, and on the ground of that characteristic I classified that book as known-again.

I may close my eyes and have an idea-presentation of that same book. The presentation is to me an object, faint in its colors, incomplete in its details, localizable almost anywhere in space. If I do not notice those characteristics, other objects may succeed and there will be no known-againness; but if I notice those characteristics, I may then at once classify that object as being a *second* time known.

I have, when walking along the street, met a person who is a stranger to me; I say to myself, I have met him before, although I am otherwise certain that I never have. Upon closer examination, I found a pleasurable feeling which arose through the partial resemblance of that person's countenance with the countenance of one of my friends. I believe that the characteristic upon which the classification of known-againness was based was in this case the pleasurable feeling.

Often I have noticed the quick image-presentation which

frequently follows immediately after the sense-presentation, to be the characteristic which was the starting point for the classification.

Neither the characteristics nor the classification, taken alone, make up recognition, but both together. The characteristic may be variable, the classification remains the same.

5 Some Characteristics.

1. Lack of liveliness, freshness and vividness in contradistinction to the qualities of objects perceived or the objects of hallucination. (Hume.) This lack of freshness, etc., may possibly consist in lack of details, or in duller and less strong sensations.¹ I need scarcely add that not only the objects of central excitation, but also the objects of peripheral excitation are capable of being known-again or recognized.

The opposite characteristics, *i. e.*, liveliness, freshness, vividness, fixity of spatial localization, etc., are the characteristics upon which is based the classification of the object as known, *here* or *there*, and *now*. This is perception. Objects are often perceived with these characteristics and are accordingly classified as *perceptions* when they are really *hallucinations* or *sense-illusions*. At the moment they are for the subject perceptions, and at the moment the classification upon the basis of certain characteristics took its normal course. Later observation shows that the external object really was not present. I believe that I have experienced cases of the opposite kind, where the object of the peripherally excited presentation was given very faintly and the classification ensued of known-againness.

2. Absence of definite spatial localization. The image (centrally excited presentation) of a friend may be localized almost anywhere or anyhow; in the perception of that friend, the object is exceedingly definite in its localization. Upon this characteristic, a classification may follow.

3. The lack of persistency, air of freedom possessed by images in contradistinction to the obstinate steadfastness of perceptions. Through all preceding philosophical speculation, there has been an emphasis of this phenomenon. In perception, they said, the mind was more *passive*, the image of the outer object was *impressed* upon the mind, the mind was more or less determined; while in the idea-world, there was freedom, and free activity. Perception is and has been one

¹For the discussion of this question we may refer to Lotze, "Metaphysik," 502-539; "Med. Psych.," 225. Stumpf, "Tonpsych.," Bd. I, 373 ff.; Bd. II, 276 ff. James, "Principles," I, 425. A. Meinong, "Viertel. f. wiss. Philos." XIII, *Über Begriff und Eigenschaften der Empfindungen*.

of the anchors of certainty. "*Mein Jetzt und Hier ist der letzte Angelpunkt für alle Wirklichkeit, also alle Erkenntnisse*" (Lipps, *Grundtatsachen*, S. 400). "*Sonnenklar ist nur das Sinnliche, nur wo die Sinnlichkeit anfängt, hört aller Zweifel und Streit auf. Das Geheimniss des unmittelbaren Wissens ist die Sinnlichkeit*" (Feuerbach).

4. The absence of muscle, joint and other sensations. The presence of some of these in certain cases of perception and the presence of others in reflection, recollection, etc., is manifest.

5. The sudden introduction into consciousness of an object by association of ideas, which object does not in the case in question properly belong to the object perceived, or to its present surroundings. By this it is known that the object perceived is known again. According to common parlance, in certain cases we must have seen that thing before, because we know its former surroundings (N. B. Recollection of a forgotten word or name). This characteristic is one of very frequent occurrence. In the *Cornhill Mag.*, Vol. XLI, p. 427, Art. "Illusions of Memory," there is a reference to this: "How many have been disappointed in revisiting old scenes to find the old, expected charm lacking! Things are not as they were. For instance, a person recalls a hill near the home of his childhood, and has the conviction that it was of great height. On revisiting the place he finds that the eminence is quite insignificant. How can we account for this? For one thing, it is to be observed that to his undeveloped childish muscles the climbing to the top meant a considerable expenditure of energy, to be followed by a sense of fatigue. The man remembers these feelings, and unconsciously reasoning by present experience, that is to say, by the amount of walking which would now produce this sense of fatigue, imagines that the height was vastly greater than it really was. Everybody knows the tendency to exaggerate the impressions of early life, as youth is the period of novel effects, when all the world is fresh and vivid, and new and striking impressions crowd in thickly on the mind. Who has not felt an unpleasant disenchantment in revisiting some garden or park that seemed a wondrous paradise to his young eyes? Past ideals, rosy and fresh, when once more seen, take on a ghastly hue."

6. The great rapidity and often surprising ease and quickness of the act of perceiving, due to preceding practice, dreams, perception, etc. Often a second idea-presentation of the object arises immediately after the perception. This characteristic is certainly one of the chiefest in recognition, including of course those cases of strange familiarity cited at the beginning of this article.

Dreams, preperception, former thought, all leave behind, on the physiological side, dispositions to be excited again in the same manner, and when a part or parts of similar thoughts again arise, there follow at once the former associations. Hence one of the characteristics by which we judge that we have seen this thing before. This has a great practical importance for the provinces of literary, scientific and art criticism. A critic believes that the new book which has been laid upon his dissection table has been already read by him ; another believes even to recognize the verses which he reads for the first time. Another knows beforehand the conclusion of a novel ; another again finds a new philosophical system old in all its parts—a thing easily understandable. Who has not heard of Oskar Blumenthal's "*Aehnlichkeitsjäger*," who hear in every note of music agreements or coincidences with well-known compositions. Dreams have quite obviously a telling effect here.

Waking imagination is another source of these "illusory" recollections. In certain morbid conditions of mind, and in the case of the few healthy minds endowed with special imaginative force, the products of this mental activity closely resemble dreams in their vividness and apparent actuality. When this is the case, illusions of memory may arise at once just as in the case of dreams. This will happen more easily when the imagination has been for some time occupied with the same group of ideal scenes, persons, or events. To Dickens, as is well known, his fictitious characters were for the time realities, and after he had finished his story, their forms and their sayings lingered with him, assuming the aspect of personal recollections.

Wigan's case ("Duality of Mind," 85 ff.) is a good exemplification of the point in question. "The strongest example of this delusion I ever recollect in my own person was on the occasion of the funeral of the Princess Charlotte. The circumstances connected with that event formed in every respect a most extraordinary psychological curiosity, and afforded an instructive view of the moral feelings pervading a whole nation and showing themselves without restraint or disguise. There is, perhaps, no example in history of so intense and so universal a sympathy." After describing the universal sympathy and grief, its causes, and how it infected everybody, he proceeds as follows : "I had obtained permission to be present on the occasion of the funeral as one of the lord chamberlain's staff. *Several disturbed nights previous to that ceremony, and the almost total privation of rest on the night immediately preceding it, had put my mind into a state of hysterical irritability, which was still further increased by*

grief and by exhaustion for want of food, for between breakfast and the hour of interment at midnight, such was the confusion in the town of Windsor that no expenditure of money could procure refreshment.

"I had been standing four hours, and on taking my place by the side of the coffin, in St. George's chapel, was only prevented from fainting by the interest of the scene. All that our truncated ceremonies could bestow of pomp was there, and the exquisite music produced a sort of hallucination. Suddenly, after the pathetic "Miserere" of Mozart, the music ceased, and there was an absolute silence. The coffin, which was placed on a kind of altar covered with black cloth (united to the black cloth which covered the pavement), *sank down so slowly through the floor that it was only in measuring its progress by some brilliant object beyond it that any motion could be perceived.* I had fallen into a sort of torpid reverie, when I was recalled to consciousness by a paroxysm of violent grief on the part of the bereaved husband as his eye suddenly caught the coffin sinking into its black grave formed by the inverted covering of the altar. In an instant I felt not merely an *impression*, but a *conviction*, that I had seen the whole scene before on some former occasion, and had heard even the very words addressed to myself by Sir George Naylor."

I have italicized certain lines of this well-delineated case, lines which indicate, along with other points brought out in this essay, the explanation of the phenomena in question.

Lalande ("Sur les paramnésies," *Rev. Philos.*, XXXVI, 485-497) rightly remarks that the paramnesia can possibly be produced by the very peculiar and almost indefinable acceleration of speed which the perception at the moment takes on. Before reading this and since, I have endeavored to study carefully every instance in my own experience of this feeling of strange familiarity often displayed in recognition, and I find in the majority of cases this peculiar acceleration as the chief characteristic, together with a rapid second idea-presentation of the object perceived. Persons in a low, nervous state of health, and others afflicted with epileptic tendencies, are often subject to this feeling, because of the unforeseen, unlooked-for rapidity of the nervous impulses underlying many of their perceptions. Arbitrary, involuntary, impulsive nerve movements are thus the primary causes of these phenomena. The patient acts as usual in classifying the phenomena as familiar and known-again; the mechanism is, however, acting unusually.

Vivid dreams leave their strong after-effect upon our waking thoughts. How hard it is sometimes to shake off the impression left by a vivid dream that a dead friend has

returned to life ! During the day that follows the dream, we have at intermittent moments something like an assurance that we have surely seen the departed one ; and though the impression is immediately corrected by reflection, it tends to revive within us with a strange pertinacity. It is highly probable that our dreams are thus, to a large extent, answerable for the sense of familiarity that we sometimes experience in visiting a new locality, or in seeing a new face.

Although we are not here concerned with time calculations, it may be well to quote the following from Oliver Wendell Holmes in his essay, "Bread and the Newspaper": "When any startling piece of war news comes, it keeps repeating itself in our minds in spite of all we can do. The same trains of thought go tramping round in circle through the brain, like the supernumeraries that make up the grand army of a stage show. Now, if a thought goes round through the brain a thousand times in a day, it will have worn as deep a track as one which has passed through it once a week for twenty years. This accounts for the ages we seem to have lived since the twelfth of April last, and, to state it more generally, for that *ex post facto* operation of a great calamity, or any very powerful impression, which we once illustrated by the image of a stain spreading backwards from the leaf of life open before us through all those which we have already turned."

7. Frequently, after an object has been quickly perceived, there arises a feeling of *hindrance*, where some expected associated presentations do not arrive. Hughlings-Jackson ("On Intellectual Aura," *Brain*, 1889, 179 ff.) says in this connection, "I have been struck by certain non-associations." And James ("Principles," I, 252 and 673 ff.) writes : "There are cases where too many paths, leading to too diverse associates, block each other's way, and all that the mind gets along with its object is a fringe of felt familiarity or sense that there *are* associates. A similar result comes about when a definite setting is only nascently aroused. We then feel that we have seen the object already, but when or where we cannot say, though we may seem to ourselves to be on the brink of saying it. That nascent cerebral excitations can affect consciousness with a sort of sense of the imminence of that which stronger excitations would make us definitely feel, is obvious from what happens when we seek to remember a name. It tingles, it trembles on the verge, but does not come. Just such a tingling and trembling of unrecovered associates are the penumbra of recognition that may surround any experience and make it seem familiar, though we know not why."

8. Often a feeling of pleasure upon perception of an object, the cause of the pleasure being hardly known.

These characteristics are not supposed to be completely enumerated, nor given in the order of their importance. In themselves they are not recognition. Moreover, an object may be perceived and anyone of these characters may possibly accompany that perception, but that will not constitute a recognition. There must be a classification as known-again.

6. *The Classification.*

At some early period in life there arose the distinction between perceptions and centrally excited presentations, or what are generally called ideas. If the child's environment had always been the objects *a*, *b*, *c*, *d* and *e*, there would have arisen invariably the concomitant perceptions *a*, *b*, *c*, *d* and *e*; but the case not being so, the time comes when the child's brain becomes so formed that upon perception of *a*, *b*, there may be absence of the external realities *c*, *d* and *e*, the child, however, because of its already formed association-paths, having the images or ideas of *c*, *d* and *e*. Gradually it learns to know that when it has certain characteristically formed presentations, faint, dim, etc., there are no corresponding external realities. There arises a classification of presentations. The ideas, like the perceptual presentations, are simply object-knowledge; when their characteristics are noticed and the presentations classified, there arises a distinction. Some fresh, full, vivid, steady in their spatial localization, etc., are called *objects present*; others, with the opposite characteristics, are called *objects known-again*. This, as far as I can see, is a simple classification, like that of certain sensations, into color sensations and sound sensations.

I emphasize the point again: it is not a classification of *perceptions present* and *perceptions known-again*; it is *objects present* and *objects known-again*. This confusion has caused volumes of error and misconception. Perceptions, when they once pass out of consciousness, are never known again, for they no longer exist. Recognition has appeared a very mysterious thing because of this fundamental error.

Prof. James ("Principles," I, 648) writes: "Memory proper, or secondary memory as it might be styled, is the knowledge of a former state of mind, after it has already once dropped from consciousness; or rather, *it is the knowledge of an event or fact of which, meantime, we have not been thinking, with the additional consciousness that we have thought or experienced it before.*" As the facts appear to me, there is no alternative here at all. The first part of the statement is

absolutely incorrect. An act of memory is not correctly described by saying that it is knowledge of a former state of mind. The former state of mind is irremediably gone forever, and *it* we can never know again. The *object*, however, of which it was a knowledge can be known again, and that is the testimony of consciousness. James quotes Ladd as saying ("Physiol. Psych.", Pt. II, chap. x): "It is a fact of consciousness on which all possibility of connected experience and of recorded and cumulative human knowledge is dependent that certain phases or products of consciousness appear with a claim *to stand for* (*to represent*) past experiences to which they are regarded as in some respect similar. It is this peculiar claim in consciousness which constitutes the essence of an act of memory," and asks why, instead of the italicized words "*to stand for* (*to represent*)," Ladd should not use the word "*know*," thus implying that one can know our past experiences. James' final dictum is that "the past is known," and that "the straightest and shortest way of saying it is the best" (p. 689)—certainly a suicidal policy if it denies the facts.

Ladd speaks of "that peculiar and mysterious *actus* of the mind, connecting its present and its past, which constitutes the essence of memory." A Gordian knot, truly, if the facts were such as they are represented to be. The *past* feelings and experiences no longer exist, and they are hence no longer "*connected*" by "that peculiar and mysterious *actus* of the mind," nor does consciousness assert that the past experiences are known or are connected with the present experiences. Centrally excited presentations of objects once perceived may arise, but they are *not* the past experiences or knowledge of past experiences. They are a re-knowing of the same object. For the person concerned, they become memories by a classification based upon certain characteristics.

What is meant, it may be asked, by the oft-repeated phrase, "referring a fact to the past"? I have a remembrance now of sitting at the window yesterday and looking at a funeral passing slowly down the street. In this act of memory I do not "know the past," as affirmed by Ladd, James, *et al.*; there are, on the contrary, visual presentations of myself sitting at the window, the street and the long line of passing carriages. Similar presentations to those of yesterday pass through my mind. There then follow knowledge of certain characteristics and the classification. The "referring a fact to the past" would then mean the thinking or presentation of that object, fact, or event *with* the objects and events associated with it and the classification as known again.

Furthermore, the introduction of associated objects, as described in the fifth characteristic, does not of itself constitute memory, nor is it always an integral part of memory. Christian Wolf (*Psychologia Empirica*, S. 174, quoted by James) writes: "Suppose you have seen Mevius in the temple, but now afresh in Titus' house. I say you *recognize* Mevius, that is, are conscious of having seen him before, because, although now you perceive him with your senses along with Titus' house, your imagination produces an image of him along with one of the temple, and of the acts of your own mind reflecting on Mevius in the temple. Hence the idea of Mevius which is reproduced in sense is contained in another series of perceptions than that which formerly contained it, and this difference is the reason why we are conscious of having had it before. . . . For whilst now you see Mevins in the house of Titus, your imagination places him in the temple, and renders you conscious of the state of mind which you found in yourself when you beheld him there. By this you know that you have seen him before, that is, you recognize him. But you recognize him because his idea is now contained in another series of perceptions from that in which you first saw him." This describes rather well one of the grounds or characteristics upon which the classification is based, but it is not of itself recognition. James writes (p. 657): "It is the *setting* of the idea, when it recurs, which makes us conscious of it as past." The following statement is, however, not wholly correct: "The only hypothesis, in short, to which the facts of inward experience give countenance is that the *brain-tracts excited by the event proper, and those excited in its recall, are in part different from each other*. If we could revive the past event without any associates, we should exclude the possibility of memory, and simply dream that we were undergoing the experience as if for the first time."

The added or differing associates in themselves are no memory. They are like the object proper, simply further object-consciousness. They may, however, act as one of the *characterization-causes* of the ensuing classification.

Furthermore, it may be added that there is in recognition no "identification of the past impression with the present one." We do not perceive the "sameness, similarity and identity" of the two. Recognition can take place without a second presentation of the same object, as has been shown above, where the characteristic upon which the classification is based may be in certain cases only the acceleration of the perception, or the faintness of the idea-presentation, or an accompanying pleasure-feeling. There would be in these

cases of recognition no comparison of present impression with past ones at all. If this be so, then the latter part of Stumpf's statement is not true. "*Die vielen neueren Untersuchungen über das 'Wiedererkennen' beachten nicht eine Mehrdeutigkeit des Ausdruckes. Zuweilen bedeutet es nur 'wiederholtes Erkennen' und dann involvirt der Akt keine Vergleichung. In anderen Fällen bedeutet er 'Erkenntniss der Gleichheit oder gar der realen Identität eines Gegenwärtigen mit einem Vergangenen' und dann involvirt er natürlich eine Vergleichung'*" ("Tonpsychologie," Bd. II, S. 7).

Moreover, we can never be absolutely sure that our classification of an object as *known-again* is absolutely correct. The characteristic may attach itself to certain presentations to which it normally or usually does not belong. Hence arise our *illusions of recognition*. The robber disappears into the darkness of the night, leaving some footprints behind him; bring the robber back, compare the prints with the robber's boots, and we may have a moral certainty that we have the same robber. In the case of recognition we can never bring back the former impression.

Thus we return to our starting point, the strange sense of familiarity and the phenomena of paramnesia. These phenomena of familiarity and paramnesia are certainly cases of the general process of recognition, and are to be explained in the same manner. They are parts of a general whole. The names given to these phenomena are many, as, for instance, "double memory," "dreamy states," "preternatural presentiments," "mental mirages or *Empfindungsspiegelung*," "reminiscence," "pseudo-reminiscences," and the "indefinable been-here-before feeling" of daily life.¹ They occur in both our normal and abnormal life, although they probably occur more frequently as pathological cases. It is certainly not uncommon among the epileptic,² and cases are reported in other forms of insanity. It is also very often connected with a fatigued and wearied state of the bodily system. Dreams, whether the "half-dream conditions" described above, or day-dreams, or reveries, or the dreams of sleep, give rise very often to one or more or similar characteristics (as described above) upon which the classification is founded. Preperceptional mental activity and that kind of mental presentation often called "unconscious" because unaccompanied by attention, give rise to one or more of the characteristics. Thus in the case of Wigan, cited above,

¹ For literature and cases, see Prof. W. H. Burnham in this JOURNAL, Vol. II, pp. 439-464.

² See Hughlings-Jackson, "Intellectual Aura," *Brain*, July, 1888; Neumann, "Lehrbuch der Psychiatrie," S. 112, and others.

and which deserves careful study, there were plainly several of these factors at work. In our general normal life, our dreams may have been very vivid, but, perhaps, in our daily life forgotten, crowded out by the stress and strain of other things. In a moment of fatigue or weariness, when the bodily tension and normal coördinated strain are loosened, the nervous impulses may be more jerky and, so to speak, more unaccountable. There then arises suddenly, by the machinery of the association of ideas, a vivid and belief-compelling idea-presentation or a warm feeling of pleasure, which really has no connection with the perceived object *A*, which is not given by the context of surrounding objects. Upon this characteristic there immediately arises the classification of known-againess. These unforeseen, unlooked-for associates are apt especially to come to the front in the approach to and in great nervous disorganization, as in cases of fatigue, weariness, epilepsy, *dementia paralytica*,¹ etc. Hence it is that it is sometimes a characteristic for the physician's prognosis and diagnosis of these diseases. Apropos of this I may cite from Burnham (*loc. cit.*, pp. 442-4) : "Kraepelin cites two cases of epilepsy where the patient had this form of paramnesia. Hughlings-Jackson has reported several cases where, in the 'intellectual aura' or 'dreamy state,' false memories occurred. One of the most important of his cases is that of a highly educated physician who is subject to attacks of *petit mal* and *haut mal*. In his report of his own case this gentleman mentions illusions of memory in the initial stages, both of *petits maux* and *hauts maux*. Speaking of his mental condition in the former, he says: 'In a large majority of cases the central feature has been mental and has been a feeling of recollection, *i. e.*, of realizing that what is occupying the attention is what has occupied it before, and indeed has been familiar, but has been for a time forgotten, and now is recovered with a slight sense of satisfaction, as if it had been sought for. My normal memory is bad, and a similar but much fainter feeling of sudden recollection of a forgotten fact is familiar. But in the abnormal states, the recollection is much more instantaneous, much more absorbing, more vivid, and, for the moment, more satisfactory, as filling up a void, which I imagine at the time I had previously in vain sought to fill. At the same time, or, perhaps I should say more accurately, in immediate sequence, I am dimly aware that the recollection is fictitious, and my state abnormal.'

"In another case reported by Ferrier, a woman had attacks

¹Kraepelin found simple paramnesia a very characteristic accompaniment of *dementia paralytica*. *Archiv f. Psych.*, Bd. XVII and XVIII, *Ueber Erinnerungsfälschungen*.

of *le petit mal* that were divided into three distinct stages, of which 'the first stage is a dreamy state or reminiscence, in which everything around her seems familiar or to have happened before.'

'Several years ago, another physician, subject to attacks of epilepsy, suggested that this form of paramnesia might serve as prognostic of epilepsy. In his own case he came to treat the experience 'as an indication for immediate rest and treatment.' Apropos of this case Hughlings-Jackson says: 'I should never, in spite of Quaerens case, diagnose epilepsy from the paroxysmal occurrence of 'reminiscence' without other symptoms, although I should suspect epilepsy if that super-positive mental state began to occur very frequently, and should treat the patient according to these suspicions were I consulted for it.' He emphasizes, however, the advantage of noting this phenomenon as a possible symptom of epilepsy."

Probably the larger part of the cases of paramnesia reported have been epileptics. Jensen reports the case of a patient complaining to him, "Doctor, I feel so very strange to-day. When I stand now like this and look at you, then it seems to me as if you had stood there once before, and as if everything had been just the same, and as if I knew what was coming; and when I think about it, I get so frightened (*schucherich*, a word used by the patient to designate the attacks), and I go back and turn around; and when it is over, the whole thing seems so ridiculous—and it has been so all the time to-day—I don't know what ails me." On finishing these words the patient immediately had an attack.¹

In normal life this recognition-illusion is immediately corrected. The association paths are traversed by nervous impulses in the customary way. In the abnormal state of weariness, epilepsy, etc., the impulses are unusually rapid and freaky, if I may use the word. There is a nervous jerkiness which produces unwanted, unlooked-for associates. Hence arise those characteristics mentioned above in unusual or abnormal association with the perceived objects. It depends upon the condition of the patient's nervous system whether and how soon the illusion will be corrected. In dreams, which may be designated pathological associational mental life, the illusion is seldom corrected, the normal associations of the wide-awake life fail to put in an appearance, thus leaving the nervous impulses to a sort of arbitrary play. In cases of acute paramnesia, it is impossible often to cure the patients of their delusions.

¹ *Vide* Burnham, *loc. cit.*, p. 459.

The ease and quickness of these cases of recognition have been a prominent feature in my experiences. The rapidity with which an object has been perceived, and the surprising immediacy and celerity with which the same object, or some apparent associate, arises at once after the perception of the object, have been to me, at least, the chief and most frequently occurring characteristics upon which the classification has been based. I speak now especially of the abnormal cases of recognition, *i. e.*, those of paramnesia. This again finds its easiest explanation in unusual excitability, irritability and jerkiness of movement in the central nervous impulses, involved in the machinery of the association of ideas. Prof. Burnham (*loc. cit.*, p. 447 in a note) writes that "a fellow-student of psychology . . . has often observed this form of illusion in his own dreams, and thinks they generally occur in morning dreams. The over-rested condition of the nerve centres may, he thinks, explain this phenomenon. When we see a strange object, its unfamiliar aspect is largely due to the difficulty we find in apperceiving its characteristics. The process of becoming acquainted with a thing consists in making the act of apperception easy. Hence, when the brain centres are over-rested, the apperception of a strange scene may be so easy that the aspect of the scene will be familiar. The fact observed by Anjel that this illusion is apt to occur in conditions of fatigue, does not necessarily conflict with this explanation. In the cases observed there may have been an abnormal ease of apperception due to hyperæsthesia induced by the fatigue. It may be added that Bonatelli thinks that illusions of memory occur in states of unusual nervous irritability. Such, in his opinion, would be the condition in vivid dreams, and in the unusual circumstances of journeys and the like."